CALIFORNIA ALLIANCE FOR GOLF

ROBERT L. BOUCHIER
EXECUTIVE DIRECTOR

3200 LOPEZ ROAD
PEBBLE BEACH

April 27, 2009

Jeanine Townsend
Clerk to the Board
Executive Office
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95812-0100

Re: Draft General Permit for Landscape Irrigation of Municipal Recycled Water

Dear Chair Hoppin and Members of the Board:

The California Alliance for Golf (CAG), a trade association representing the golf industry, appreciates this opportunity to comment on the draft General Permit. The golf industry understands its responsibility to conserve scarce water resources and accordingly to serve as end users of recycled water whenever reasonably feasible. Recycled water can be a reliable and preferred source for golf users.

We understand the primary goal of the general permit is to induce more potential end users to utilize recycled water. Unfortunately, as we read the current draft, it does not provide a proper framework to accomplish that goal.

We have reviewed the draft with our constituents and consultants experienced in the use of recycled water and with golf facilities considering use in the future. With their inputs in mind, CAG submits the following specific questions and comments:

Pg. 2 - #4 – This section describes treatment and use standards for Producers and Distributors of tertiary recycled water. If the recycled water proposed to be used to irrigate a landscape is of a quality higher than tertiary treatment, such as water treated by reverse osmosis using micro-filtration, would that proposal go on to a faster track with different permit requirements?

Pg. 5 - #16 – This section describes salinity and other factors affecting plant growth. It is well known that recycled water typically contains higher levels of salts. We see no reference in this draft to leaching as a necessary practice for end users. Leaching salts from the root zone is typically critical for the ability of site managers to create, maintain and sustain healthy plants.

Pg. 5 - #19 – This section describes salinity in connection with agricultural beneficial use. We do not understand the need to discuss agricultural applications in the context of a permit addressing landscape irrigation. Salinity, of course, is a relevant subject. This section, if retained, should be limited accordingly.

Pg. 6 - #23 – This section describes current studies of chemicals of emerging concern (CECs) that may be present in recycled water. The golf industry currently is in the midst of a two-year research study CAG initiated to determine the extent to which golf courses can remove/filter PPCP/EDCs found in recycled water. We suggest that our study should be listed along with the others. Please contact us at your convenience.

Pg. 9 - #44a – This section describes application of recycled water at agronomic rates reflecting nutrient requirements of the Use Area. Almost all recycled water has some nutrient value. The end user has no control over the amount of nutrients delivered in the recycled water. If nutrient concentrations exceed the requirements of plants when the agronomic (water) rate is applied some plant toxicity can occur. The producer of the recycled water, not the end user, should be responsible for nutrient removal.

Pg. 11 - #3 – This section prohibits use of recycled water for property zoned as single family residential. This item potentially conflicts with Section 13552.2 of the Water Code which provides that use of potable domestic water for irrigation or residential landscaping is a waste or unreasonable use of water. Several housing developments in California, including for example Serrano in El Dorado Hills, use recycled water to irrigate backyards and common areas of single family residential homes as well as an adjacent golf course. These are desirable "green" uses of recycled water which should be encouraged. This section, as currently worded, could be used as a reason to deny a permit in such situations.

Pg. 11 - #4, 5, &6 – These sections prohibit use of recycled water respectively for human consumption, within a Groundwater Recharge Reuse Project and in cooling towers or other industrial uses. We note that these uses are outside the context of landscape irrigation. They should be addressed separately in a finding on the scope of permit applicability.

Pg. 12 - #8 – This section prohibits use of recycled water when there is evidence that CECs are a "concern." The term "concern" is not defined and as such could be interpreted in a way inconsistent with the Recycled Water Policy. Any requirements regarding CECs should be deferred until the blue-ribbon panel provides science-based information.

Pg. 12 - #11 – This section prohibits application of recycled water within 50 feet of surface water unless approved by CDPH. If an "impoundment" (pond or lake) on a golf course is deemed to be "surface water" in this context, a golf course should be allowed to irrigate within 50 feet of a pond or lake and the language of this section should so provide.

Pg. 12 - #16 – This section prohibits application of any material that results in a violation of the Safe Drinking Water Act. This refers to the list of Proposition 65 chemicals, an extensive list which would severely limit irrigation projects. This prohibition serves no articulated purpose in connection with landscape irrigation and therefore should be deleted.

Pg. 14 - #12 – This section specifies standards for warning signs. We believe appropriate signage should be agreed between each user and purveyor.

Pg. 14 - #14 – This section requires avoidance of contact between workers and recycled water. Our experience teaches that this broad approach is impractical. Our golf course workers often are required to fix ruptured pipes containing recycled water. Our golf course workers often are required to water localized dry areas with hoses. Anyone who works at a site using recycled water may come in contact with it. The language in this section should be modified or deleted.

Pg. 14 - #15 – This section refers to a list (Attachment C) of Best Management Practices (BMPs) to be implemented as a minimum requirement. Appropriate BMPs for use of recycled water in specific situations are critical to end users at golf facilities. Accordingly, we attach hereto detailed comments from our technical experts regarding the proposed BMPs. We recommend the following wording for this section: "BMPs shall be developed and implemented to achieve a safe and effective irrigation system. As a minimum, the Producer and the Distributor shall encourage the User to adopt appropriate BMPs either as listed in Attachment C or other BMPs as needed or appropriate."

Pg. 14 - #16 – This section specifies minimum practices to prevent ponding and conditions conducive to proliferation of mosquitoes and other vectors. This subject matter should be addressed in the BMPs described in the preceding section.

Pg. 16 - #5 – This section mandates that the Distributor submit an Operations and Maintenance Plan (O&M Plan) to the State Water Board with numerous listed requirements. We see this as an invitation to bogging down in paperwork and additional costs. This will not induce more end users to seek applications of recycled water. We agree that there should be due diligence, but a number of the requirements are excessive and need not be applied universally: for example, submitting water tests for each use area, accounting for the type of soil at the site, the plant nutritional requirements and so on. We ask that these requirements be modified to lessen the burdens on all parties.

Summarizing our perspective, we do not find the monitoring and reporting requirements listed in the draft General Permit to be helpful. We believe that requiring weekly site investigations and annual reports for each use area would be excessive and impractical for most landscape irrigation projects. Especially for end users, most of the monitoring and reporting requirements should be removed. The burdensome procedural requirements in the draft General Permit do not support the goal of greater use of recycled water on landscapes.

Finally, please review the attached comments from our technical experts on the list of BMPs in Attachment C to the draft.

Thank you for your consideration.

Robert L. Bouchier

Robert L. Bouchier, Executive Director

ATTACHMENT C

BEST MANAGEMENT PRACTICES (BMPS)

Comments from the California Alliance for Golf

I. REQUIRED BMPS

A. Most golf courses perform regular inspections of their irrigation system. When leaks are detected they are generally repaired within 72 hours. If a release of 50,000 gallons occurs – most pumping systems would shut the system down. If the golf course is on a direct feed and a 50,000 gallon release occurred at night, course managers may not be aware of the release until crews arrive for morning maintenance. The release would certainly be corrected at that time.

C. There are possible exceptions to this BMP that need to be considered. Golf courses that are along the coast utilize their irrigation systems when large storms are pushing waves and sea spray onto the golf course. Superintendents routinely will turn on the irrigation system to help flush the very salty water through the soil profile in order to protect the quality of the turf from further salt damage. Another possibility is when a golf course has an impoundment and a large storm has produced a large amount of runoff that is entering their impoundment. The golf course superintendent could turn on irrigation heads around the golf course to assist in lowering the level in the impoundment. These practices are not common practice, but some type of provision needs to be made regarding the wording of this BMP.

D. See example above.

II. GOC

A. What constitutes regular training? Once a year, every other year, etc. If the permit is going to list this requirement, then is should also list the frequency. This is vague and needs clarification. Are there requirements for becoming a recycled water use supervisor? Any education needed, any specialized training, certification, etc.

B. The statement as written is too burdensome. The statement should be revised to say the supervisor should inspect the facilities and make sure they are in good working order, operated in a safe and efficient manner, and repaired and maintained as needed. The liability section should be deleted.

III. WORKER/PUBLIC PROTECTION

A. The word hazards should be replaced by the word risk.

C, D, & F. – Are these really needed in this permit?

E. – If recycled water is used for landscape irrigation around clubhouse patios, barbeque areas, picnic benches, etc. there is always a chance for broken pipes and/or and sprinklers accidentally coming on and potentially getting these areas wet. Rewording the statement to

say precautions should be taken to avoid recycled water from coming in contact with outside areas that prepare, serve or distribute food products.

IV. **EFFICIENT IRRIGATION**

A. The word appropriate is very vague in this statement. What is the definition of appropriate? Good –working condition? Up-to-date? Clarification as to what appropriate is needs to occur.

C. If and when the system was designed, depending upon how much the entity had to spend on the installation may determine how much flexibility the system has when in operation. If the system was installed on a lower budgeted amount or the budget was cut during the installation, then the system could be very limited in its flexibility.

D. Utilizing the same brand and model is limiting. A situation may require a different model from another manufacturer, being restricted to only having one option is not allowing managers to solve the problem in a most efficient manner. In the golf industry, it is not appropriate for Matched Precipitation Rates for nozzles.

F. The spray heads that have high precip rates are not typically used on slopes. The most frequently used sprinkler is a rotor which has lower precip rates. Most managers use a cycle and soak approach to watering, even on hilly terrain.

G. The word installed needs to be install.

H. The word installed needs to be install.

K. For those golf courses that utilize a pump station, this is a common practice. In a commercial setting, this practice is more difficult to fully implement due to a variety of factors such as, programming the central control properly, maintaining equipment properly and field personnel training.

<u>Maintenance</u>

M. Clarification needs to be made on the 80% head to head coverage statement. Does it mean the sprinkler needs to throw to 80% of the distance to the next head? Does it mean that 80% of the area to be irrigated has to have head to head coverage?

<u>Management</u>

S. The section should incorporate leaching fractions into the statement. If a golf course utilizes recycled water, then at some point in time, leaching will need to occur. Depending upon the length of the irrigation season and the quality of the water, the leaching requirements may vary.

T. This statement presents a significant challenge for the golf industry as it pertains to dry-out time and periods of public use. Maintenance of the golf course occurs when golfers are present. Frequently maintenance workers will spot watering small areas instead of using the irrigation system to irrigate a dry area. Golfers frequently travel in and out of the areas that are being watered. Perhaps the statement should read" irrigation with recycled water should occur during periods of minimal public use of the use area."

U. Add the phrase "on-site weather station" to the statement.

X. Change the statement to read "the majority of irrigation should occur in the evening ..."

Z. Insert the words "perform appropriate cultural practices that improves infiltration of air and water into the soil."

AA. "Perform appropriate horticultural practices to create the best growing environment for landscape vegetation."

BB. Clarification of the phrase "infiltration areas." Is this a drainage basin? A definition explaining what an infiltration area is needed.

CC. Installing storm drain inlet valves or plugs to all of the golf courses drainage basins to avoid accidental discharges during dry weather is not practical. It is feasible that some dry weather runoff could occur but it would mainly occur from a large pipe rupture or some other catastrophic event that is not foreseen. Retrofitting all drainage basins for this rare occasion is not recommended. Retrofitting select basins, those that drain off-property or in street storm drains is feasible.

DD. Is a list of low impact development practices readily available? Is the list of practices recommended by a professional organization? Are the practices applicable to the golf industry?

EE. Suggested wording – Employ water budgeting for the Use Area by using evapotranspiration data from CIMIS or a local on-site weather station and crop coefficients from Water Use Classification of Landscape Species (WUCOLS).

GG. Suggested wording – Awareness and/or Conformance of the local and/or State Water Efficient Landscape Ordinance.